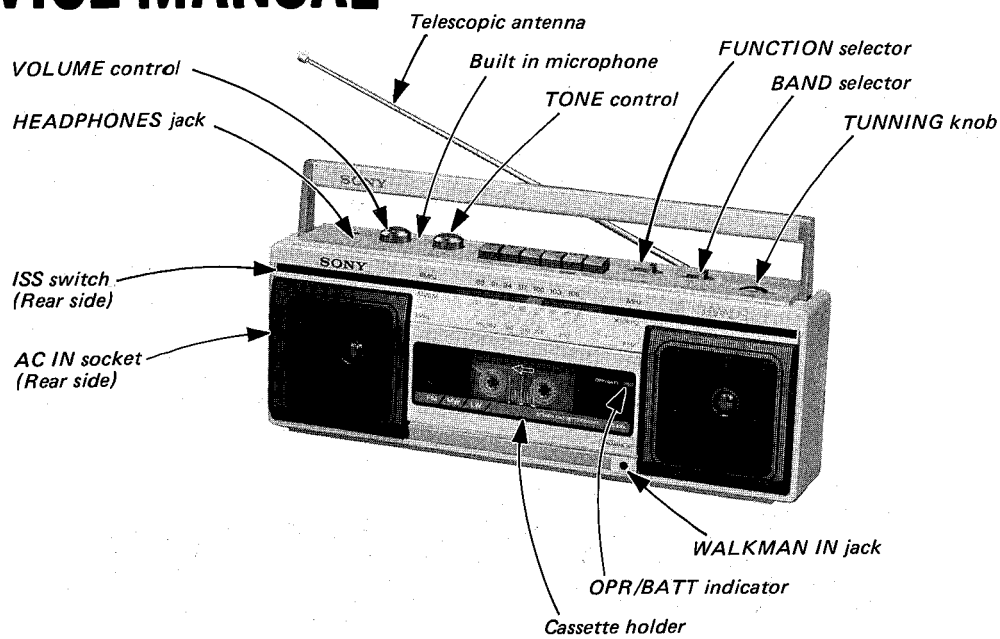
CFS-230L

SERVICE MANUAL

AEP Model
UK Model



SPECIFICATIONS

Tape Transport Mechanism Type	MF-230L/S

Radio section

Frequency range FM 87.6–107 MHz
MW 530–1,605 kHz
LW 150–255 kHz

Antennas FM: Telescopic antenna
MW/LW: Built-in ferrite bar antenna

Tape recorder section and general

Recording system 4-track 2-channel stereo

Fast winding time Approx. 1 min. 30 sec. with Sony cassette C-60

Frequency response 80–8,000 Hz

Speakers Full range 9 cm (4 inches) dia. x 2

Power output 2W + 2W (at 10% harmonic distortion) at dc operation

Inputs WALKMAN IN (line input) jack (stereo minijack)
sensitivity 78 mV
input impedance 47 kilohms

Outputs Headphones jack (stereo minijack) for 8–300 ohm impedance headphones

Power requirements 9 V dc, six IEC designation R14 batteries (size C)
UK model: 240V ac, 50Hz
AEP model: 220V ac, 50Hz

Power consumption 12 W ac

Battery life (hours)

Batteries	FM recording
Sony New Super SUM-2(NS)	8
Sony Eveready AM2 alkaline	18

Dimensions Approx. 436 x 163 x 93 mm (w/h/d) (17¼x6½x3¾ inches)
incl. projecting parts and controls
not incl. handle

Weight Approx. 2.5 kg (5 lb 9 oz) incl. batteries

0 dB = 0.775 V

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY SHADING AND MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

MICROFILM

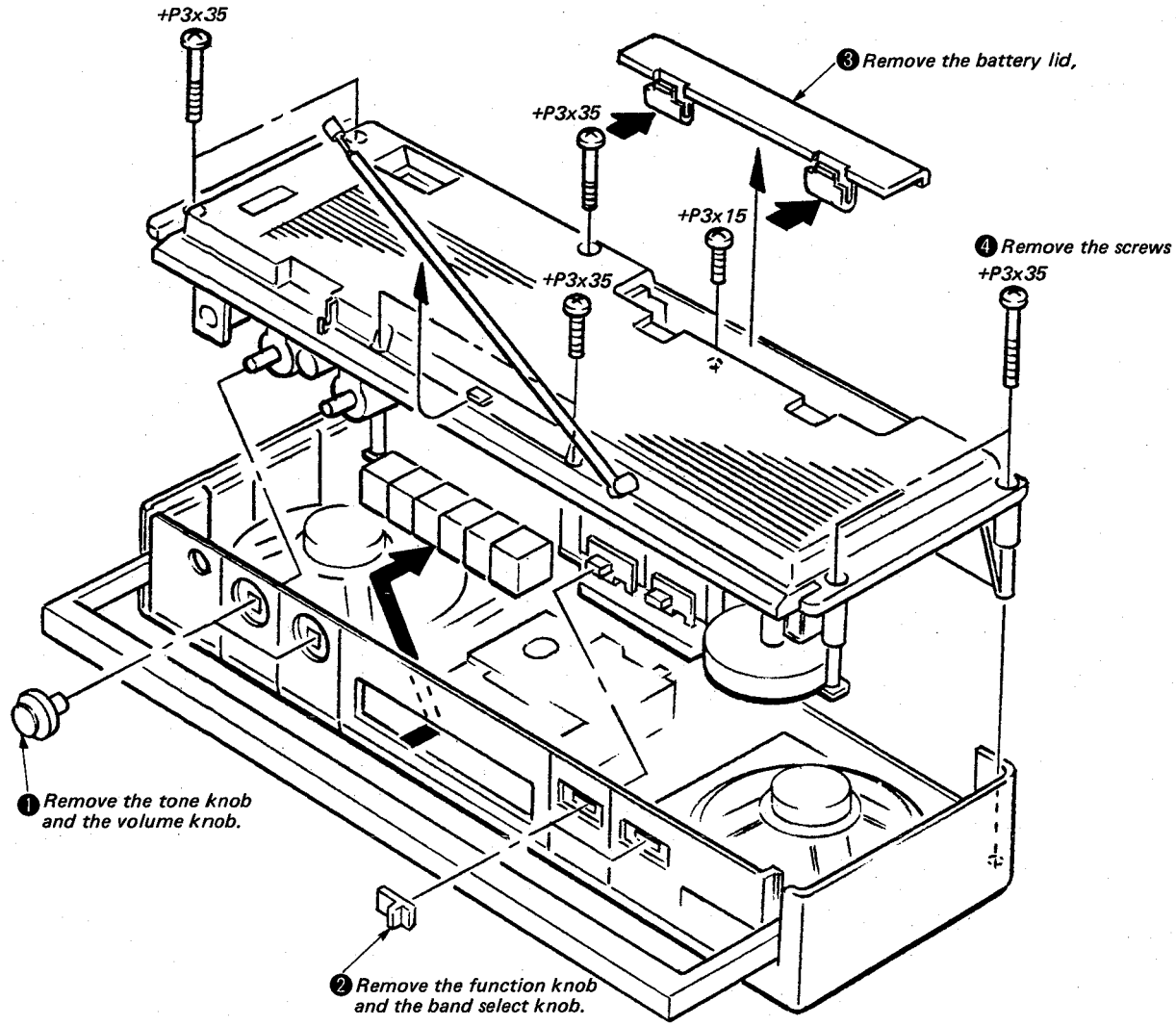
FM/MW/LW STEREO CASSETTE CORDER

SONY®

TC

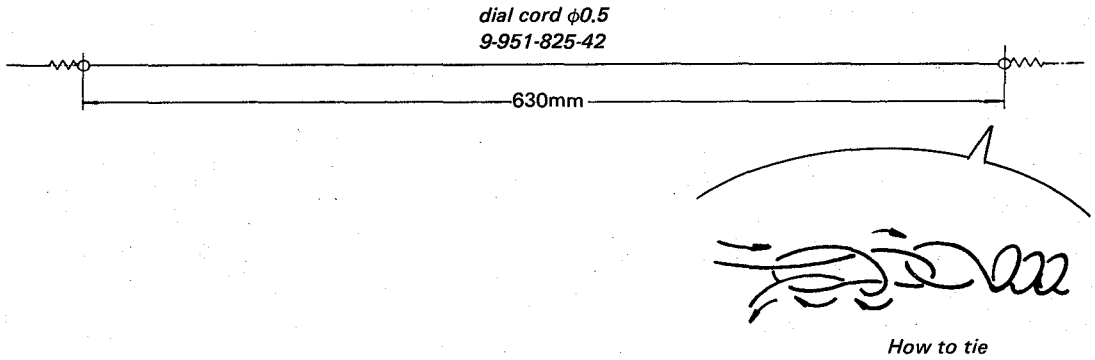
SECTION 1
DISASSEMBLY

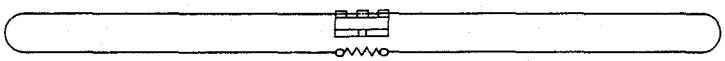
CABINET REMOVAL



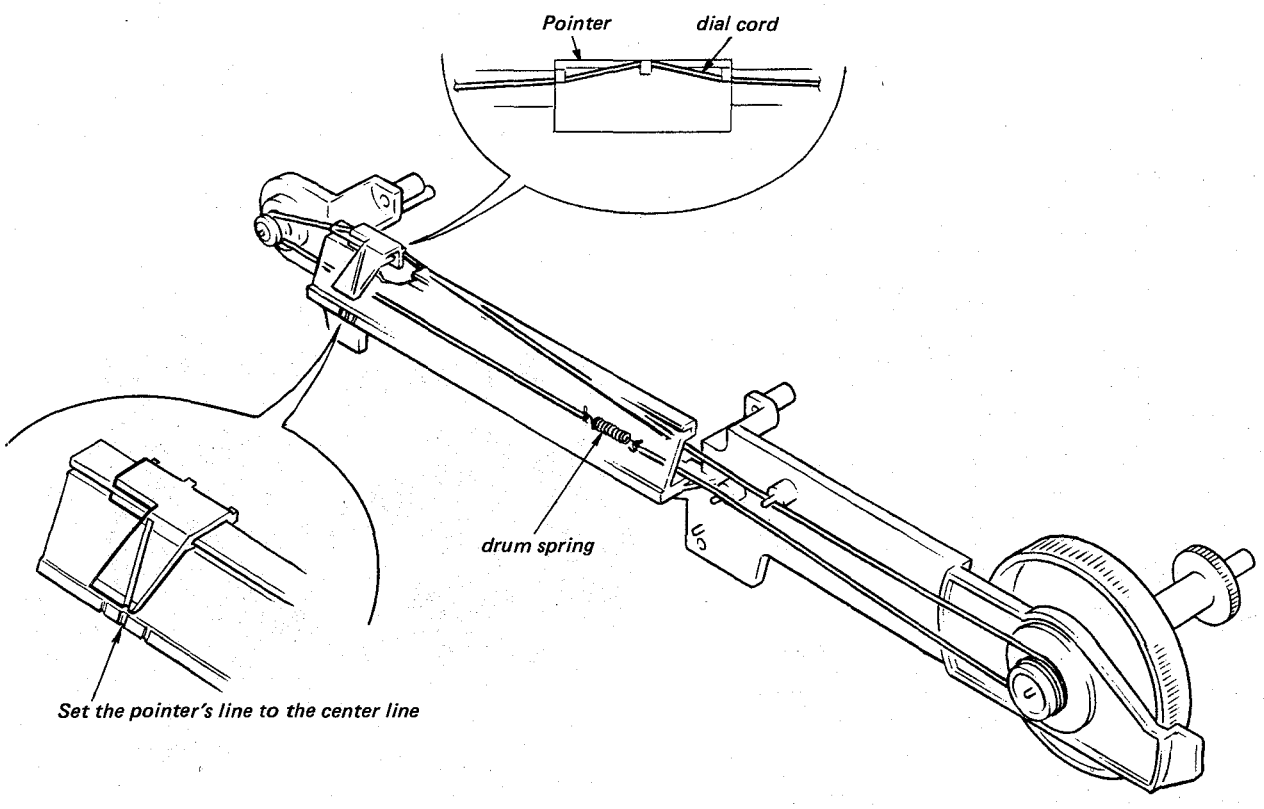
SECTION 2
DIAL CORD STRINGING

1. Dial cord preparation





2. Dial cord stringing and pointer setting



SECTION 3
ADJUSTMENTS

3-1. MECHANICAL ADJUSTMENTS

PRECAUTION

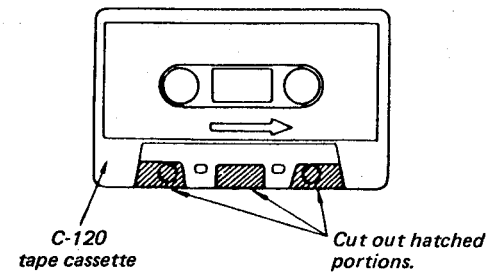
1. Clean the following parts with a denatured-alcohol-moistened swab:

record/playback head	pinch roller
erase head	rubber belts
capstan	idlers

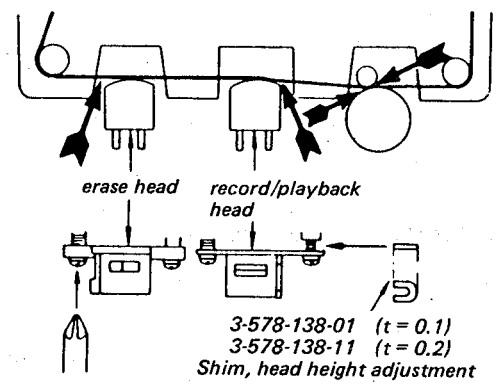
2. Demagnetize the record/playback head with a head demagnetizer. (Do not bring the head demagnetizer close to the erase head.)
3. Do not use a magnetized screwdriver for the adjustments.
4. After the adjustments, apply suitable locking compound to the parts adjusted.
5. The adjustments should be performed with the rated power supply voltage unless otherwise noted.
6. The adjustments should be performed in the order given in this service manual.
   The adjustments should be performed for both L-CH and R-CH.

Head Height Adjustment

1. Prepare an adjustment cassette as shown below.



2. In record mode and viewing from the front, adjust the head heights to eliminate tape curl and tape twist at portions of arrow.

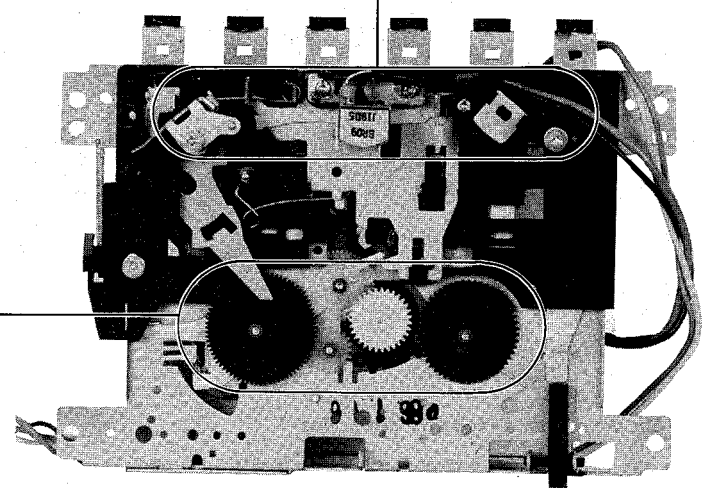


Torque Measurement

Torque	Torque meter	Meter reading
Forward	CQ-102C	30–60 g•cm (0.42–0.83 oz•inch)
Rewind	CQ-201B	50–150 g•cm (0.69–2.07 oz•inch)
Fast Forward	CQ-201B	50–150 g•cm (0.69–2.07 oz•inch)
Back Tension	CQ-102C	1–4 g•cm (0.0138–0.055 oz•inch)

Tape Pulling Force Measurement.

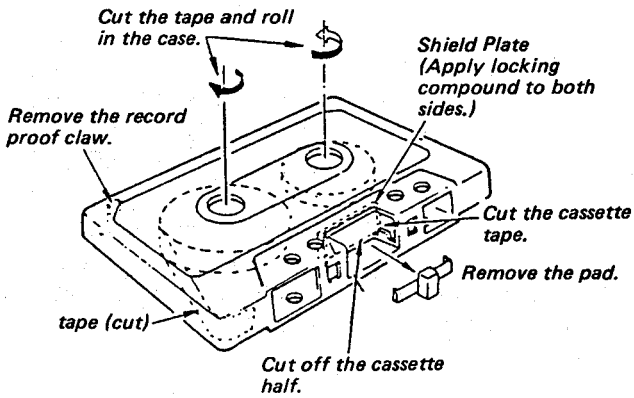
Meter	Meter reading
CQ-403	more than 80 g (more than 2.81 oz)

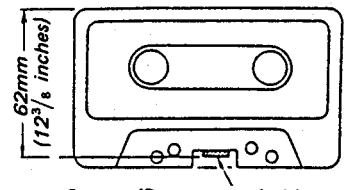


REC/PB Head Installation and Position Adjustment

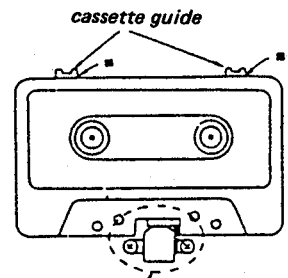
- This adjustment is necessary for the CUE detection of AMS.

1. Cassette Tape Preparation

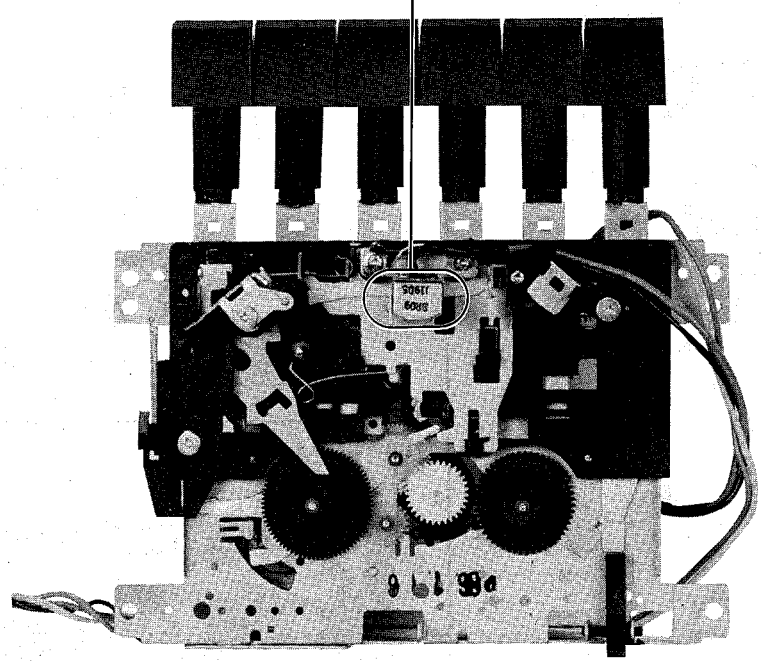

Cut the tape and roll in the case.
Shield Plate (Apply locking compound to both sides.)
Remove the record proof claw.
Cut the cassette tape.
Remove the pad.
tape (cut)
Cut off the cassette half.



*Spacer (Prepare a suitable material and install it so that the distance marked by * is 62mm (2³/₈ inches) and apply locking compound.)*



2. Set the cassette tape into the set and install the head so that the edge of the head is in contact with the spacer when pressing the FWD button and FF button or the FWD button and REW button at the same time. (At this time, the portion marked by ■ is in contact with the cassette). Then, perform the REC/PB head Azimuth Adjustment and apply locking compound to an installation screw.



3-2. ELECTRICAL ADJUSTMENTS

CASSETTE SECTION

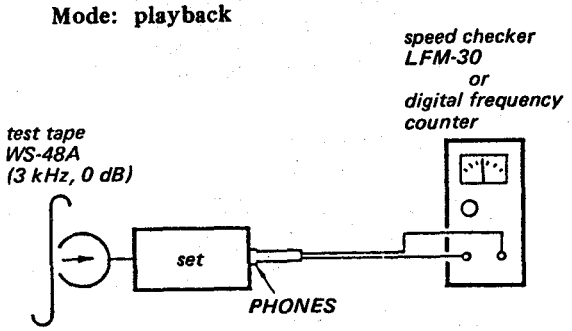
Tape Speed Adjustment

Setting:

VOLUME control: mechanical mid

Procedure:

Mode: playback

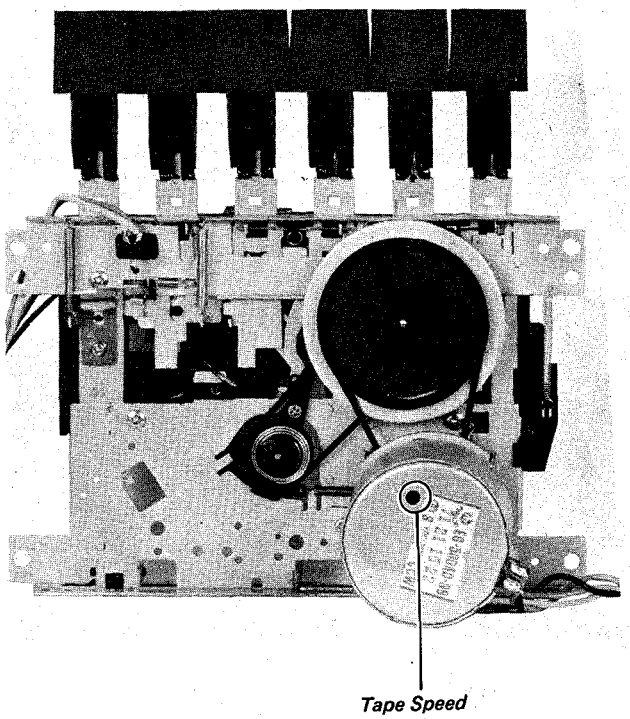


Specification:

Speed checker	Digital frequency counter
−2.5 to +3%	2,925 to 3,090 Hz

Frequency difference between the beginning and the end of the tape should be within 1 % (30 Hz).

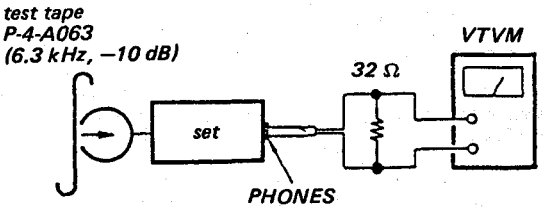
Adjustment Location:



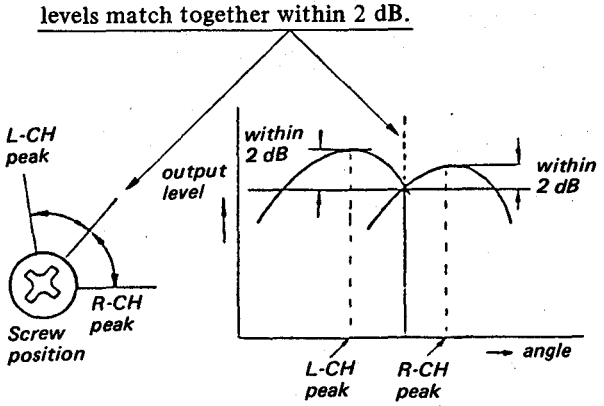
Record/playback Head Azimuth Adjustment

Procedure:

1. Mode: playback

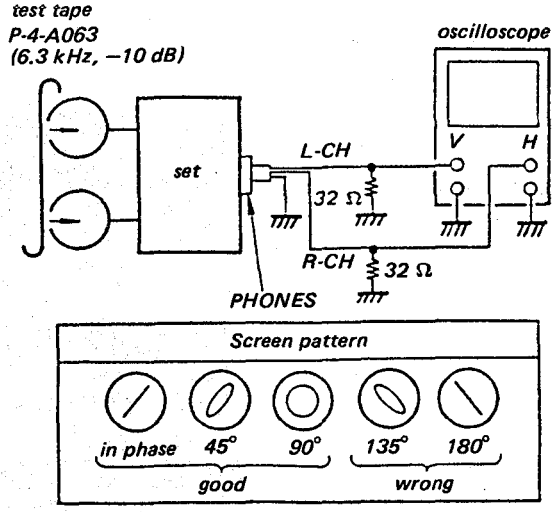


2. Turn the adjustment screw for the maximum output levels. If these levels do not match, turn the adjustment screw until both of output levels match together within 2 dB.

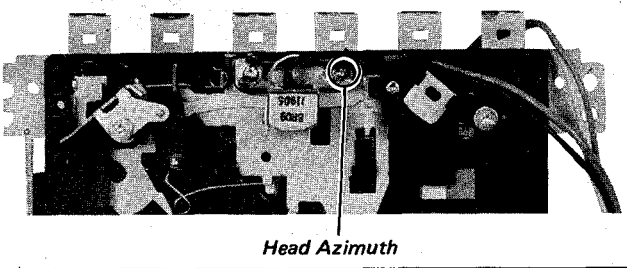


3. Phase Check

Mode: playback



Adjustment Location:



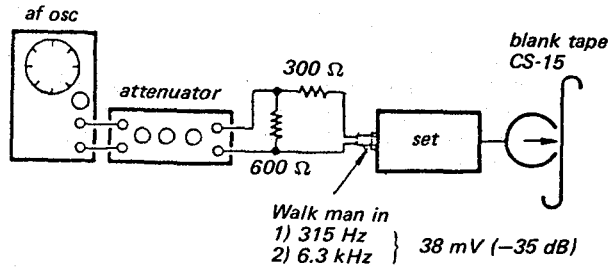
Record Bias Adjustment

Setting:

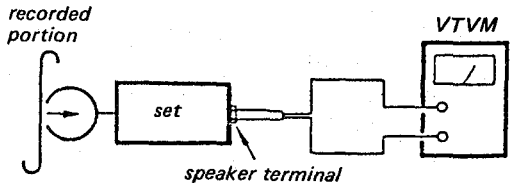
TONE control: MAX
FUNCTION switch: TAPE

Procedure:

1. Mode: record



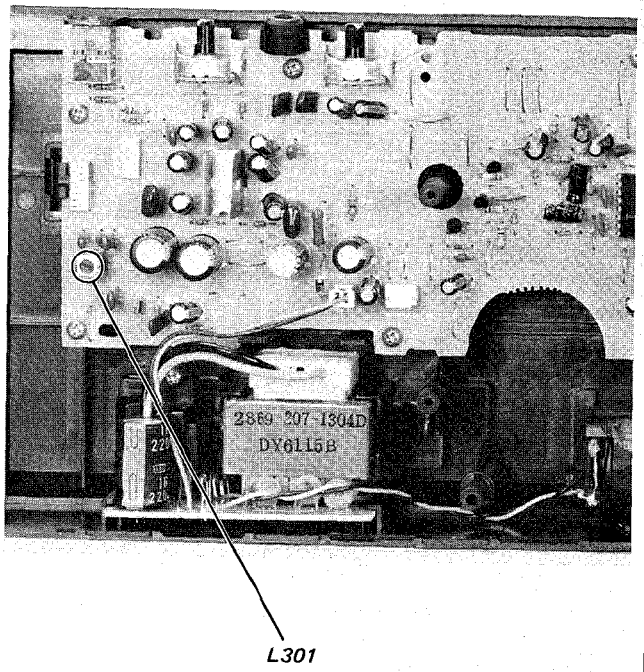
2. Mode: playback



3. Confirm that the 6.3 kHz playback signal level is 1 ± 3 dB relative to the 315 Hz signal level. If necessary, adjust L301 and repeat steps 1–3.

Adjustment Location:

– main board –



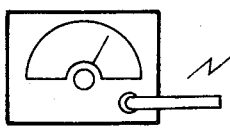
RADIO SECTION

- **MW/LW Section**

Setting:

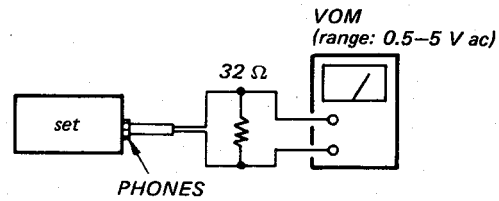
FUNCTION Selector: RADIO
BAND Selector: MW/LW

AM rf signal generator



Put the lead-wire antenna close to the set.

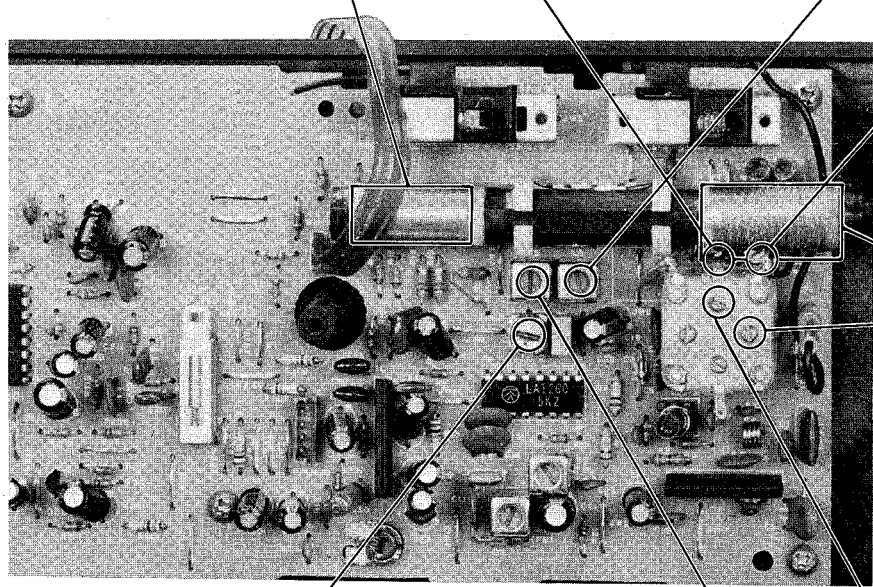
30% amplitude modulation by 400 Hz signal output . . . . 60 – 70 dB



- Repeat the procedures in each adjustment several times, and the frequency coverage and tracking adjustments should be finally done by the trimmer capacitors.

AM TRACKING ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
620 kHz	1,400 kHz
L4	CT3

LW FREQUENCY COVERAGE ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
145 kHz	265 kHz
L6	CT5



LW TRACKING ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
L7	160 kHz
CT6	250 kHz

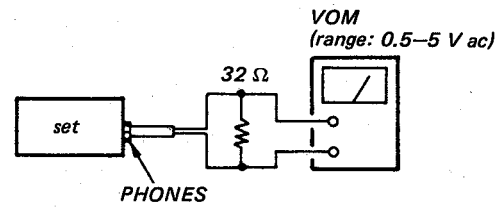
T2
460 kHz
Adjust for a maximum reading on VTVM.
AM IF ALIGNMENT

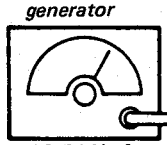
L5	CT4
515 kHz	1,680 kHz
Adjust for a maximum reading on VTVM.	
AM FREQUENCY COVERAGE ADJUSTMENT	

• FM Section

Setting:

FUNCTION Selector: RADIO
BAND Selector: FM





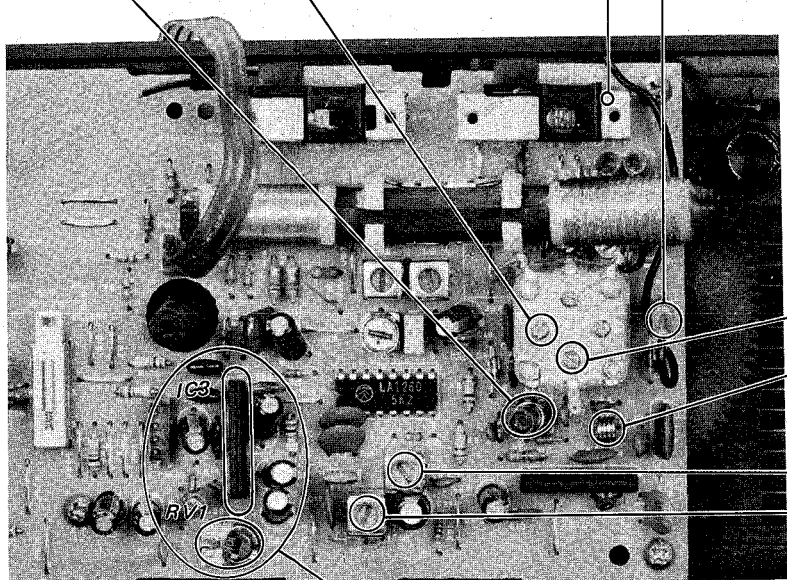
±22.5 kHz frequency deviation by 400 Hz signal output . . . . 15 – 25 dB

- Repeat the procedures in each adjustment several times, and the frequency coverage and tracking adjustments should be finally done by the trimmer capacitors.

FM FREQUENCY COVERAGE ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
87.35 MHz	108.25 MHz
L2	CT2

FM TRACKING ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
CT1	108.25 MHz
L1	87.35 MHz

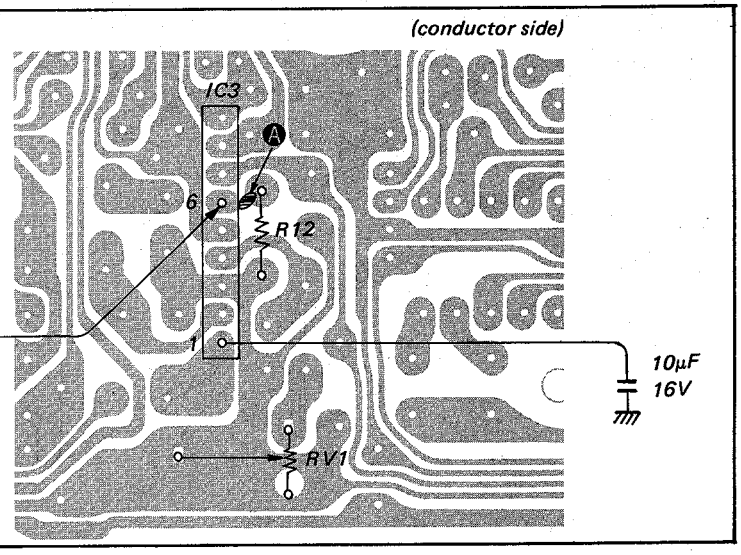
FM IF ALIGNMENT	
Adjust for a maximum reading on VTVM.	
T3	10.7 MHz
T1	

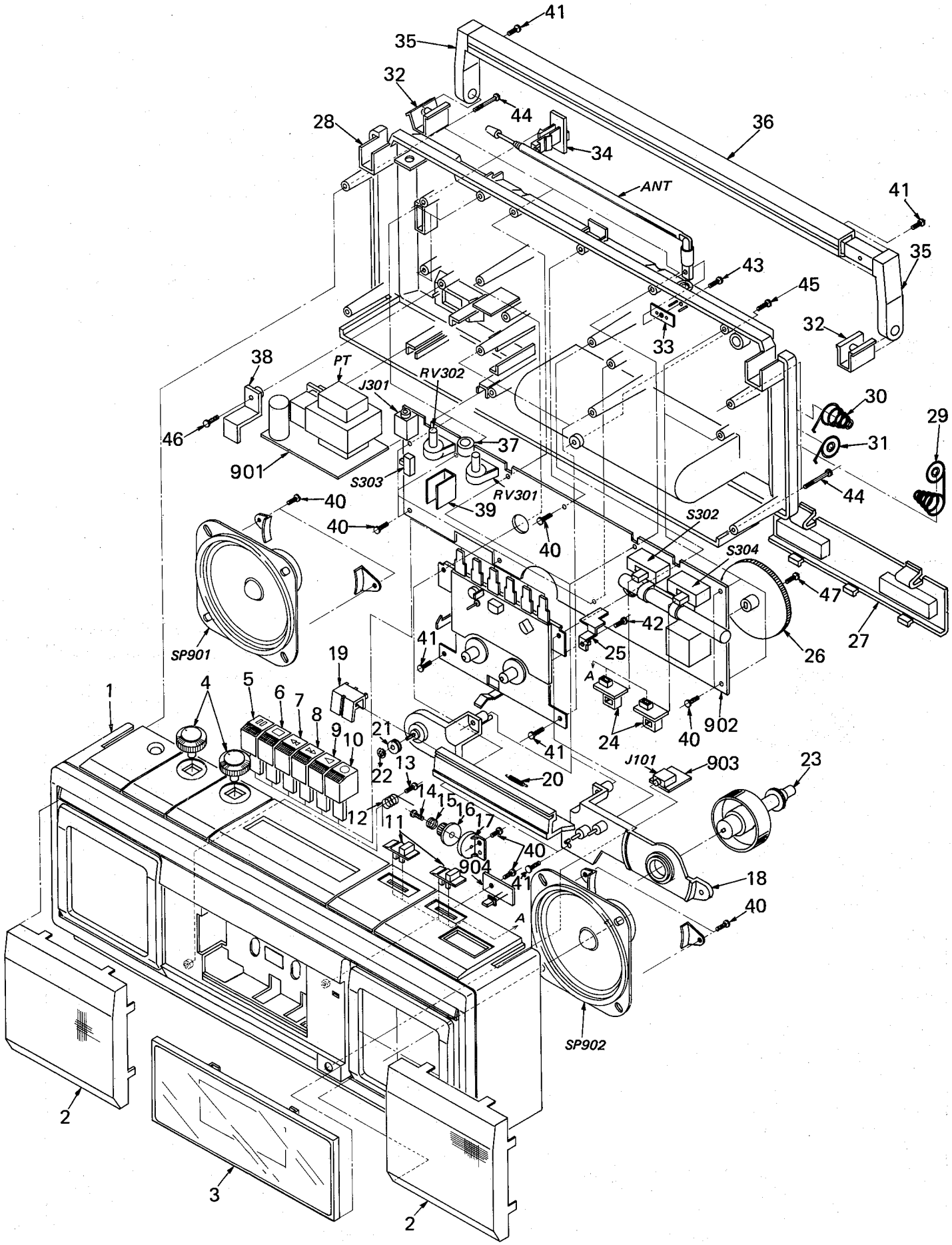


VCO Adjustment

Procedure:

1. Cut the pattern Ⓐ
2. Adjust RV1 for 38 kHz ±200 Hz on the counter.
3. After the adjustment, solder the pattern Ⓐ

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RV302
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SP901
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SECTION 4
EXPLODED VIEWS

NOTE:
The mechanical parts with no reference number in the exploded views are not supplied.

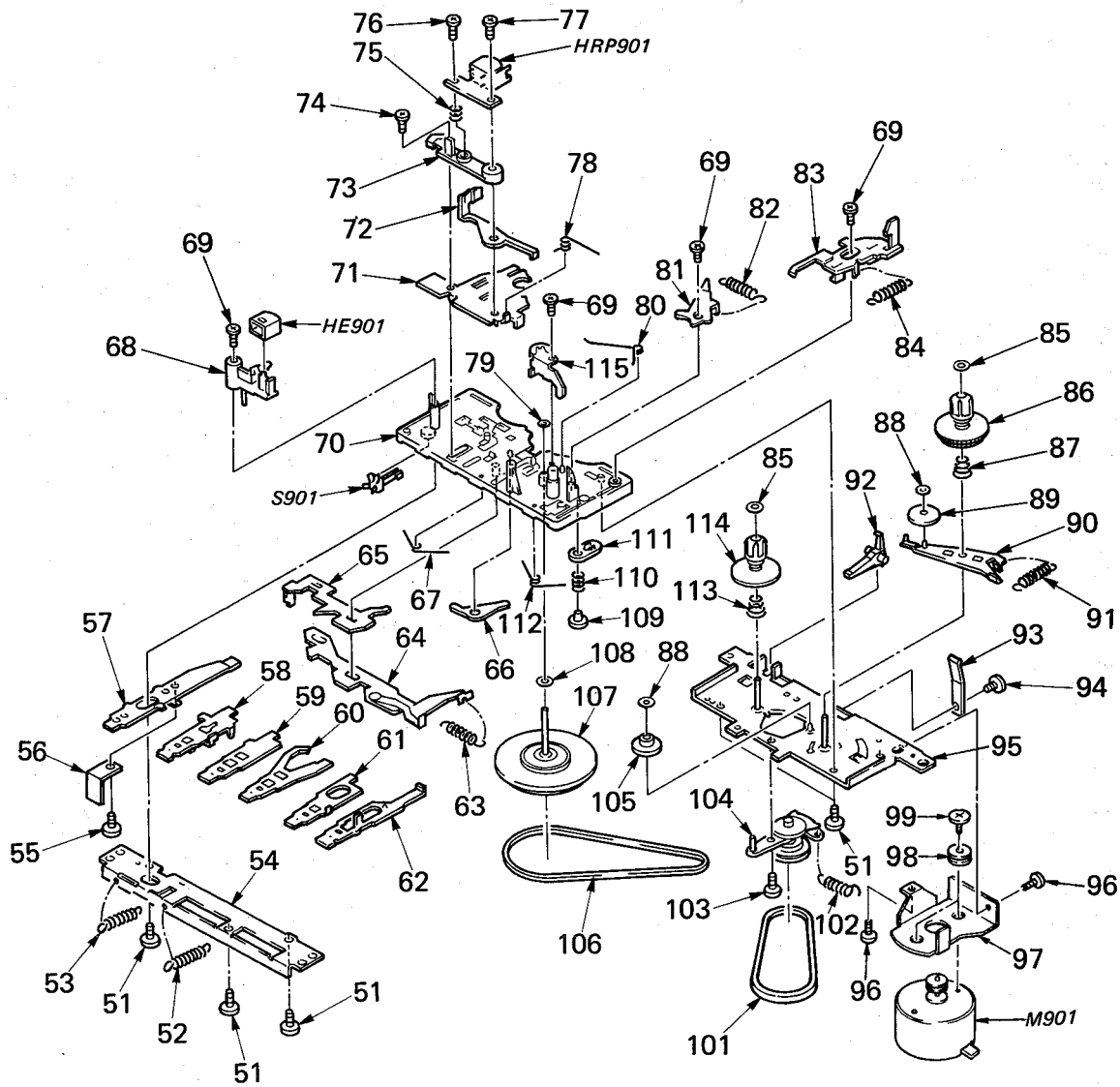
· Items marked " ★ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

· The construction parts of an assembled part are indicated with a collation number in the remark column.

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

No.	Part No.	Description	Remarks
1	3-597-510-01	CABINET-FRONT ASSY	
2	3-597-548 01	GRILLE, SPEAKER	
3	X-3597-411-1	CASSETTE LID ASSY	
4	3-597-512-01	KNOB-ROTARY	
5	3-597-523-01	KNOB-DECK PAUSE	
6	3-597-524-01	KNOB-DECK STOP	
7	3-597-525-01	KNOB-DECK FF	
8	3-597-526-01	KNOB-DECK REW	
9	3-597-527-01	KNOB-DECK PLAY	
10	3-597-528-01	KNOB-DECK REC	
11	3-597-511-01	KNOB-SELECTOR	
12	3-597-514-01	SPRING-DOOR	
13	7-685-646-29	SCREW +BV 3X8	
14	7-685-792-04	SCREW +PTP 2.6X6	
15	3-597-517-01	SPRING-DAMPER	
16	3-597-515-01	DAMPER-GEAR	
17	3-597-516-01	HOLDER-DAMPER, GEAR	
18	3-597-518-01	CHASSIS-MAIN	
19	3-597-519-01	POINTER	
20	*3-597-529-01	SPRING-DIAL	
21	*3-597-520-01	WHEEL-DIAL (A)	
22	*3-597-521-01	WASHER-STOPPING	
23	3-597-536-01	KNOB-TUNING	
24	3-597-533-01	HOLDER-SELECTOR	
25	*3-597-522-01	SPRING-RECORD	
26	3-597-547-01	WHEEL, DRUM	
27	X-3597-412-1	BATTERY LID ASSY	
28	3-597-535-01	CABINET-BACK	
29	3-597-422-01	SPRING BATTERY (+ -)	
30	3-597-423-01	SPRING BATTERY (-)	
31	3-597-424-01	SPRING BATTERY (+)	
32	3-597-532-01	GUIDE-HANDLE	
33	3-597-452-01	BRACKET ANTENNA	
34	3-597-537-01	KNOB-LEVER	
35	3-597-530-01	HANDLE-BEAM	
36	3-597-531-01	HANDLE-BAR	
37	3-597-451-01	MICROPHONE HOLDER	
38	*3-597-465-01	AC SOCKET COVER	
39	*3-597-431-01	HEAT SINK	
40	7-685-646-29	SCREW +BV 3X8	
41	7-685-248-29	SCREW +KTP 3X12 TYPE2 SLIT	
42	7-685-133-19	SCREW +BTP 2.6X6 TYPE2 N-S	
43	7-685-752-04	SCREW +PTT 3X8	
44	7-682-556-09	SCREW +B 3X35	
45	7-685-650-11	SCREW +BVTP 3X16 TYPE2 N-S	
46	7-685-647-14	SCREW +BVTP 3X10 TYPE2 N-S	
47	7-685-792-04	SCREW +PTT 2.6X6 (S)	

CFS-230L



No.	Part No.	Description	Remarks
51	7-685-103-24	SCREW +P 2X5 TYPE2 SLIT	
52	3-598-877-01	PLAY BUTTON LEVER SP (S)	
53	3-598-829-01	BUTTON LEVER SPRING (A)	
54	*3-390-225-01	CHASSIS, SUB	
55	3-598-862-01	+PS 2X3	
56	*3-598-831-01	REC SPRING PLATE	
57	3-390-218-01	LEVER, REC BUTTON	
58	*3-390-221-01	LEVER, PLAY BUTTON	
59	*3-390-222-01	LEVER, REW BUTTON	
60	*3-390-223-01	LEVER, FF BUTTON	
61	*3-390-219-01	LEVER, STOP BUTTON	
62	*X-3598-105-1	LEVER ASSY, PAUSE BUTTON	
63	3-598-832-01	ACTUATOR SPRING	
64	X-3598-107-1	ACTUATOR ASSY, PUSH BUTTON	
65	*3-598-816-01	SWITCH PLATE	
66	*3-598-823-01	REW LEVER	
67	3-598-879-01	BUTTON LEVER SPRING (E)	
68	3-598-842-01	MG ARM	
69	3-598-844-01	P.M.E. SCREW	
70	X-3598-106-1	BASE ASSY, MAIN	
71	*3-598-880-01	HEAD PANEL	
72	*X-3598-803-1	SENSING PLATE ASSY	
73	3-598-839-01	HEAD BASE	
74	7-621-772-38	SCREW +B 2X6	
75	3-598-845-01	SPRING	
76	7-621-772-30	SCREW +B 2X6	
77	7-627-553-88	SCREW, PRECISION +P 2X7	
78	3-598-882-01	PINCH ROLLER SPRING	
79	3-598-868-01	P WASHER CUT (1.55X3.8X0.5)	
80	3-598-881-01	HEAD PANEL SPRING (S)	
81	*3-598-878-01	AUTO LEVER	
82	3-598-834-01	AUTO LEVER SPRING	
83	3-598-859-01	EJECT SLIDE LEVER	
84	3-598-860-01	EJECT SLIDE LEVER SP	
85	3-598-867-01	P WASHER CUT (1.2X3X0.4)	
86	X-3598-809-1	TAKE-UP REEL ASSY	
87	3-598-852-01	BACK TENSION SPRING	
88	3-598-866-01	P WASHER CUT (1.2X3X0.25)	
89	3-596-940-01	GEAR, T ROLLER	
90	X-3598-808-1	TAKE-UP GEAR PLATE ASSY	
91	3-598-884-01	T.G. PLATE SPRING	
92	3-598-851-01	RECORD SAFETY LEVER	
93	3-390-227-01	SPRING, PACK	
94	7-621-555-12	SCREW +K 2X3	
95	*X-3598-813-1	REEL BASE ASSY	
96	7-685-781-04	SCREW +PTT 2X4 (S)	
97		BRACKET, MOTOR	
98		MOTOR RUBBER	
99	3-598-855-01	MOTOR COLLER SCREW	
100	3-598-858-01	MAT	
101	3-598-883-01	RF BELT	
102	3-598-847-01	RF PULLEY ARM SPRING	
103	3-596-945-01	SCREW, ARM COLLAR	
104	X-3598-812-1	RF PULLEY ARM ASSY	
105	3-596-941-01	GEAR, FF	
106	3-390-226-01	BELT, MAIN	
107	X-3598-806-1	FLYWHEEL ASSY	
108	3-598-869-01	P WASHER CUT (2.05X4X0.4)	
109	3-598-826-01	PAUSE STOPPER	
110	3-598-825-01	PAUSE LEVER SPRING	
111	*3-598-824-01	PAUSE LEVER	
112	3-390-224-01	SPRING (C), BUTTON LEVER	
113	3-598-850-01	BACK TENSION SPRING	
114	X-3598-810-1	SUPPLY REEL ASSY	
115	X-3598-804-1	PINCH ROLLER ASSY	
HE901	1-543-279-11	E.HEAD	
HRP901	1-543-280-11	R.P.HEAD	
M901	3-597-507-01	MOTOR	

SECTION 5
ELECTRICAL PARTS LIST

NOTE:
- Items marked " ★ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- If there are two or more same circuitsin a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:
MF:μF, PF:μμF.

RESISTORS
- All resistors are in ohms.
- F : nonflammable

COILS
- MMH : mH, UH : μH

SEMICONDUCTORS
In each case, U : μ, for example:
UA...: μA..., UPA...: μPA..., UPC...: μPC, UPD...: μPD...

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
901	*1-619-508-11	PC BOARD, POWER			
902	A-3260-432-A	PC BOARD, MAIN ASSY			
903	1-619-690-11	PC BOARD, WM IN JACK			
904	1-619-689-11	PC BOARD, LED			
905	*1-506-877-11	WAFER, CONNECTOR 5P			
906	*1-506-902-11	WAFER, CONNECTOR 4P			
907	*1-508-796-00	PIN, CONNECTOR 2P			
908	*1-508-797-00	PIN, CONNECTOR 4P			
ANT	1-501-346-11	ANTENNA, TELESCOPIC			
BPF1	1-567-687-11	FILTER, CERAMIC			
C1	1-101-455-00	CERAMIC	0.001MF	20%	50V
C2	1-102-961-00	CERAMIC	27PF	5%	50V
C3	1-102-864-00	CERAMIC	5PF	0.5PF	50V
C4	1-101-005-00	CERAMIC	0.022MF		50V
C5	1-102-114-00	CERAMIC	470PF	10%	50V
C6	1-102-514-00	CERAMIC	22PF	5%	50V
C7	1-102-720-00	CERAMIC	22PF	5%	50V
C9	1-102-744-00	CERAMIC	4PF	0.25PF	50V
C10	1-101-005-00	CERAMIC	0.022MF		50V
C11	1-101-005-00	CERAMIC	0.022MF		50V
C12	1-123-379-00	ELECT	0.47MF	20%	50V
C13	1-101-005-00	CERAMIC	0.022MF		50V
C14	1-101-005-00	CERAMIC	0.022MF		50V
C15	1-101-005-00	CERAMIC	0.022MF		50V
C17	1-123-356-00	ELECT	10MF	20%	16V
C19	1-123-356-00	ELECT	10MF	20%	16V
C21	1-123-307-00	ELECT	100MF	20%	10V
C22	1-101-361-00	CERAMIC	150PF	5%	50V
C23	1-123-369-00	ELECT	4.7MF	20%	50V
C24	1-101-005-00	CERAMIC	0.022MF		50V
C25	1-136-161-00	MYLAR	0.047MF	10%	50V
C28	1-123-380-00	ELECT	1MF	20%	50V
C29	1-123-382-00	ELECT	3.3MF	20%	50V
C30	1-104-077-00	POLYSTYRENE	1000PF	5%	50V
C31	1-123-369-00	ELECT	4.7MF	20%	50V
C32	1-130-485-00	MYLAR	0.015MF	5%	50V
C33	1-130-485-00	MYLAR	0.015MF	5%	50V
C34	1-102-973-00	CERAMIC	100PF	5%	50V
C35	1-102-973-00	CERAMIC	100PF	5%	50V
C36	1-103-701-00	STYROL	100PF	5%	50V
C101	1-123-382-00	ELECT	3.3MF	20%	50V
C102	1-123-382-00	ELECT	3.3MF	20%	50V
C103	1-101-455-00	CERAMIC	0.001MF	20%	50V
C104	1-102-973-00	CERAMIC	100PF	5%	50V
C105	1-102-973-00	CERAMIC	100PF	5%	50V
C106	1-123-307-00	ELECT	100MF	20%	10V

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
C107	1-101-884-00	CERAMIC	56PF	5%	50V
C108	1-102-102-00	CERAMIC	0.0047MF	20%	50V
C109	1-130-475-00	MYLAR	0.0022MF	5%	50V
C110	1-102-102-00	CERAMIC	0.0047MF	20%	50V
C111	1-123-356-00	ELECT	10MF	20%	16V
C112	1-130-488-00	MYLAR	0.027MF	5%	50V
C113	1-123-356-00	ELECT	10MF	20%	16V
C114	1-130-475-00	MYLAR	0.0022MF	5%	50V
C115	1-123-307-00	ELECT	100MF	20%	10V
C116	1-123-307-00	ELECT	100MF	20%	10V
C117	1-123-311-00	ELECT	1000MF	20%	10V
C118	1-136-165-00	MYLAR	0.1MF	10%	50V
C120	1-123-608-00	ELECT	0.22MF	20%	50V
C121	1-123-369-00	ELECT	4.7MF	20%	50V
C122	1-102-973-00	CERAMIC	100PF	5%	50V
C201	1-123-382-00	ELECT	3.3MF	20%	50V
C202	1-123-382-00	ELECT	3.3MF	20%	50V
C203	1-101-455-00	CERAMIC	0.001MF	20%	50V
C204	1-102-973-00	CERAMIC	100PF	5%	50V
C205	1-102-973-00	CERAMIC	100PF	5%	50V
C206	1-123-307-00	ELECT	100MF	20%	10V
C207	1-101-884-00	CERAMIC	56PF	5%	50V
C208	1-102-102-00	CERAMIC	0.0047MF	20%	50V
C209	1-130-475-00	MYLAR	0.0022MF	5%	50V
C210	1-102-102-00	CERAMIC	0.0047MF	20%	50V
C211	1-123-356-00	ELECT	10MF	20%	16V
C212	1-130-488-00	MYLAR	0.027MF	5%	50V
C213	1-123-356-00	ELECT	10MF	20%	16V
C214	1-130-475-00	MYLAR	0.0022MF	5%	50V
C215	1-123-307-00	ELECT	100MF	20%	10V
C216	1-123-307-00	ELECT	100MF	20%	10V
C217	1-123-311-00	ELECT	1000MF	20%	10V
C218	1-136-165-00	MYLAR	0.1MF	10%	50V
C220	1-123-608-00	ELECT	0.22MF	20%	50V
C221	1-123-369-00	ELECT	4.7MF	20%	50V
C222	1-102-973-00	CERAMIC	100PF	5%	50V
C301	1-123-307-00	ELECT	100MF	20%	10V
C303	1-123-307-00	ELECT	100MF	20%	10V
C304	1-123-678-12	ELECT(BLOCK)	10MF	20%	16V
C305	1-123-332-00	ELECT(BLOCK)	47MF	20%	16V
C306	1-123-321-00	ELECT	220MF	20%	16V
C307	1-123-310-00	ELECT	470MF	20%	10V
C309	1-123-307-00	ELECT	100MF	20%	10V
C310	1-136-149-00	MYLAR	0.0047MF	10%	50V
C311	1-130-476-00	MYLAR	0.0027MF	5%	50V
C313	1-136-153-00	MYLAR	0.01MF	10%	50V

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
C314	1-101-455-00	CERAMIC	0.001MF	20%	50V
C315	1-123-679-11	ELECT	22MF		16V
C316	1-123-332-00	ELECT(BLOCK)	47MF	20%	16V
C317	1-102-109-00	CERAMIC	180PF	10%	50V
C318	1-101-005-00	CERAMIC	0.022MF		25V
C319	1-123-307-00	ELECT	100MF	20%	10V
C320	1-101-005-00	CERAMIC	0.022MF		50V
C321	1-102-118-00	CERAMIC	0.0012MF	10%	50V
C403	1-103-703-11	POLYSTYRENE	120PF	5%	50V
C404	1-103-711-00	POLYSTYRENE	270PF	5%	50V
C405	1-102-971-00	CERAMIC	82PF	5%	50V
C406	1-102-971-00	CERAMIC	82PF	5%	50V
C901	1-101-005-00	CERAMIC	0.022MF		50V
C902	1-101-005-00	CERAMIC	0.022MF		50V
C903	1-101-005-00	CERAMIC	0.022MF		50V
C904	1-101-005-00	CERAMIC	0.022MF		50V
C905	1-123-325-00	ELECT	2200MF	20%	16V
CF1	1-567-689-11	FILTER, CERAMIC (FM)			
CF2	1-567-688-11	FILTER, CERAMIC			
CV	1-151-536-11	CAP, VAR, POLYETHYLENE			
D1	8-719-815-55	DIODE 1S1555			
D2	8-719-911-06	DIODE 1SS106			
D301	8-719-168-88	DIODE RD6.8F-B			
D901	8-719-200-02	DIODE 10E2			
D902	8-719-200-02	DIODE 10E2			
D903	8-719-200-02	DIODE 10E2			
D904	8-719-200-02	DIODE 10E2			
IC1	8-759-204-03	IC TA7358AP			
IC2	8-759-801-24	IC LA1260S			
IC3	8-759-203-87	IC TA7343AP			
IC301	8-759-205-91	IC TA7668BP			
IC302	1-806-909-11	IC LA4555			
J101	1-563-020-11	JACK, HEADPHONE			
J301	1-563-019-11	JACK, HEADPHONE			
L1	*1-422-278-11	COIL			
L2	1-421-880-11	COIL			
L4	1-402-227-11	ANTENNA, FERRITE-ROD (MW/LW)			
L5	1-406-213-11	COIL, MW OSC			
L6	1-404-687-11	COIL-7CAN			
L7	1-402-233-11	COIL, ANT			
L301	1-404-685-11	COIL-7CAN			
MIC901	1-542-075-11	MICROPHONE, CONDENSER			
PT	⚠1-448-607-11	(AEP)...TRANSFORMER, POWER			
PT	⚠1-448-608-11	(UK)...TRANSFORMER, POWER			

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
Q301	8-729-606-33	TRANSISTOR 2SC2603-F			
Q302	8-729-606-33	TRANSISTOR 2SC2603-F			
Q303	8-729-606-33	TRANSISTOR 2SC2603-F			
Q304	8-729-606-33	TRANSISTOR 2SC2603-F			
Q305	8-729-606-33	TRANSISTOR 2SC2603-F			
Q306	8-729-606-33	TRANSISTOR 2SC2603-F			
R1	1-249-429-11	CARBON	10K	5%	1/6W
R2	1-247-795-00	CARBON	33	5%	1/6W
R3	1-249-421-11	CARBON	2.2K	5%	1/6W
R4	1-247-879-00	CARBON	100K	5%	1/6W
R5	1-247-879-00	CARBON	100K	5%	1/6W
R7	1-249-419-11	CARBON	1.5K	5%	1/6W
R8	1-247-851-00	CARBON	6.8K	5%	1/6W
R9	1-249-421-11	CARBON	2.2K	5%	1/6W
R10	1-247-831-00	CARBON	1K	5%	1/6W
R11	1-247-849-00	CARBON	5.6K	5%	1/6W
R12	1-247-831-00	CARBON	1K	5%	1/6W
R13	1-247-887-00	CARBON	220K	5%	1/6W
R14	1-249-423-11	CARBON	3.3K	5%	1/6W
R15	1-249-423-11	CARBON	3.3K	5%	1/6W
R16	1-247-875-00	CARBON	68K	5%	1/6W
R17	1-247-875-00	CARBON	68K	5%	1/6W
R18	1-247-877-00	CARBON	82K	5%	1/6W
R19	1-247-877-00	CARBON	82K	5%	1/6W
R20	1-249-433-11	CARBON	22K	5%	1/6W
R21	1-247-083-00	CARBON	10	5%	1/4W
R102	1-247-831-00	CARBON	1K	5%	1/6W
R103	1-247-819-00	CARBON	330	5%	1/6W
R104	1-249-421-11	CARBON	2.2K	5%	1/6W
R105	1-247-809-00	CARBON	120	5%	1/6W
R106	1-247-869-00	CARBON	39K	5%	1/6W
R107	1-249-432-11	CARBON	18K	5%	1/6W
R108	1-247-859-00	CARBON	15K	5%	1/6W
R109	1-247-853-00	CARBON	8.2K	5%	1/6W
R110	1-249-421-11	CARBON	2.2K	5%	1/6W
R112	1-247-767-00	CARBON	2.2	5%	1/6W
R113	1-249-405-11	CARBON	100	5%	1/6W
R114	1-249-437-11	CARBON	47K	5%	1/6W
R115	1-247-819-00	CARBON	330	5%	1/6W
R116	1-249-414-11	CARBON	560	5%	1/6W
R117	1-247-831-00	CARBON	1K	5%	1/6W
R202	1-247-831-00	CARBON	1K	5%	1/6W
R203	1-247-819-00	CARBON	330	5%	1/6W
R204	1-249-421-11	CARBON	2.2K	5%	1/6W
R205	1-247-809-00	CARBON	120	5%	1/6W

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

ELECTRICAL PARTS

Ref.No.	Part No.	Description				
R206	1-247-869-00	CARBON	39K	5%	1/6W	
R207	1-249-432-11	CARBON	18K	5%	1/6W	
R208	1-247-859-00	CARBON	15K	5%	1/6W	
R209	1-247-853-00	CARBON	8.2K	5%	1/6W	
R210	1-249-421-11	CARBON	2.2K	5%	1/6W	
R212	1-247-767-00	CARBON	2.2	5%	1/6W	
R213	1-249-405-11	CARBON	100	5%	1/6W	
R214	1-249-437-11	CARBON	47K	5%	1/6W	
R215	1-247-819-00	CARBON	330	5%	1/6W	
R216	1-249-414-11	CARBON	560	5%	1/6W	
R217	1-247-831-00	CARBON	1K	5%	1/6W	
R301	1-247-831-00	CARBON	1K	5%	1/6W	
R302	1-249-435-11	CARBON	33K	5%	1/6W	
R303	1-249-405-11	CARBON	100	5%	1/6W	
R304	1-213-127-00	METAL OXIDE	47	5%	1W	F
R305	1-247-817-00	CARBON	270	5%	1/6W	
R306	1-247-831-00	CARBON	1K	5%	1/6W	
R307	1-247-837-00	CARBON	1.8K	5%	1/6W	
R308	1-247-849-00	CARBON	5.6K	5%	1/6W	
R309	1-247-795-00	CARBON	33	5%	1/6W	
R310	1-247-831-00	CARBON	1K	5%	1/6W	
R311	1-249-429-11	CARBON	10K	5%	1/6W	
R312	1-247-831-00	CARBON	1K	5%	1/6W	
R314	1-247-891-00	CARBON	330K	5%	1/6W	
R316	1-247-851-00	CARBON	6.8K	5%	1/6W	
R317	1-249-437-11	CARBON	22K	5%	1/6W	
RV1	1-228-724-00	RES, ADJ, CARBON 10K				
RV301	1-237-308-11	RES, VAR, CARBON 50K (TONE)				
RV302	1-237-307-11	RES, VAR, CARBON 50K (VOLUME)				
S301	1-570-425-11	SWITCH, SLIDE (PLAY/RECORD)				
S302	1-570-631-11	SWITCH, SLIDE (FUNCTION)				
S303	1-570-699-11	SWITCH, SLIDE (ISS/MODE)				
S304	1-570-631-11	SWITCH, SLIDE (BAND)				
S901		SWITCH, LEAF (MOTOR)				
S902		SWITCH, LEAF (AC/BATT)				
SP901	1-503-661-11	SPEAKER				
SP902	1-503-661-11	SPEAKER				
T1	1-404-639-11	FM IFT				
T2	1-404-638-11	AM IFT				
T3	1-404-640-11	FM DET				
TP1	*3-597-534-11	TAP-STUD				

ACCESSORY & PACKING MATERIAL

Part No.	Description
⚠1-558-688-11	CORD, AC
3-527-213-00	LABEL, SERIAL NUMBER
3-565-234-00	POLYETHYLENE, FORMED (250X400)
3-597-433-01	BAG, POLYETHYLENE
3-597-503-01	INDIVIDUAL CARTON
3-597-504-01	MASTER CARTON, 2 SETS
3-597-505-01	INDIVIDUAL CARTON
3-597-506-01	MASTER CARTON, 2 SETS
3-703-707-01	STICKER, SONY SYMBOL (21)
3-760-751-11	MANUAL, INSTRUCTION
*3-764-430-01	INSTRUCTION, DBP CAUTION

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

SONY

FM/MW/LW STEREO CASSETTE CORDER

CFS-230L

AEP Model
UK Model

SCHEMATIC DIAGRAM

Note: The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Note:

- All capacitors are in μF unless otherwise noted. 50 WV or less are not indicated except for ele and tantalums.
- All resistors are in Ω and ¼W or less unless specified.
- ⟶: signal path.

ess otherwise noted. pF: μμF
ated except for electrolytics

¼W or less unless otherwise

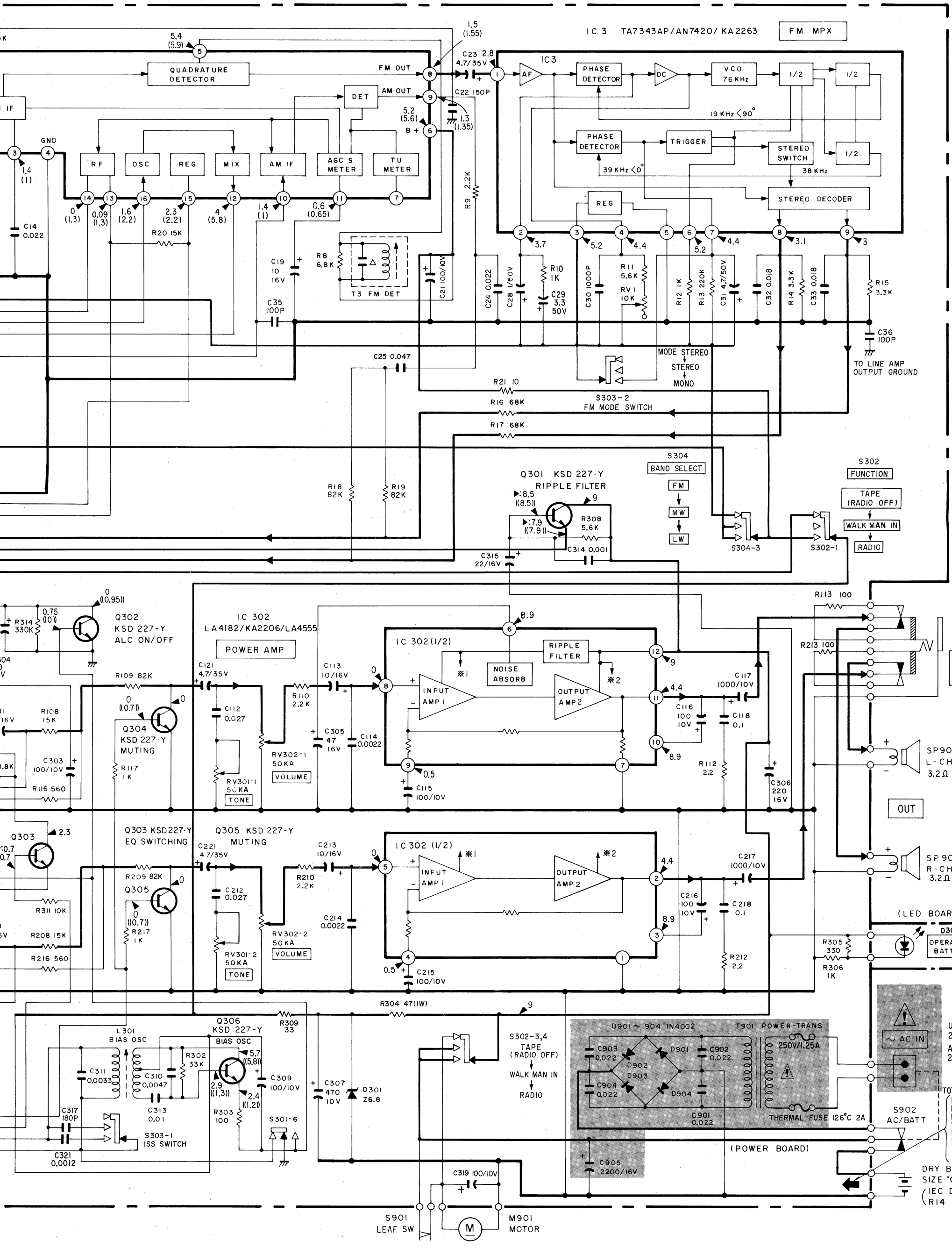
- Switch

Ref. No.	Switch	Position
S301	REC/PB	PB
S302	FUNCTION	TAPE (RADIO OFF)
S303	FM MODE	STEREO
S304	BAND	FM
S901	MOTOR	OFF
S902	AC/DC	DC

- ▬▬ : B+ bus.
- ▭ : adjustment for repair
- Total current is measured with no cassette installed.
- Power voltage is 9 V and fed with regulated dc power supply from battery terminal.
  Voltages are dc with respect to ground with no-signal (detuned) conditions with VOM (DC 50kΩ/V).
  Voltage variations may be noted due to normal production tolerances.

Radio section
no mark : FM
( ) : AM

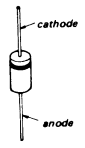
Amplifier section
no mark : STOP
(( )) : WALKMAN IN



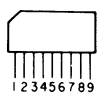
EMICONDUCTOR LOCATION

No.	Location	Ref. No.	Location	Ref. No.	Location
	E-13	Q301	D-6	D1	D-14
	D-12	Q302	C-8	D2	F-12
	D-11	Q303	E-9	D3	D-13
01	D-8	Q304	D-6	D301	E-4
02	D-3	Q305	D-6	D302	A-6
		Q306	E-2	D901	H-3
				D902	G-3
				D903	G-2
				D904	H-2

IS1555 ISS106 RD6.8F-B 10E2



TA7358AP TA7343AP



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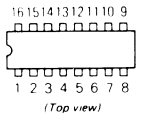

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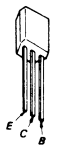
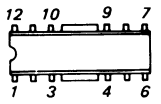
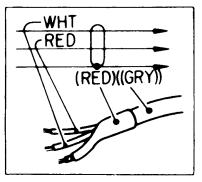


LA4555



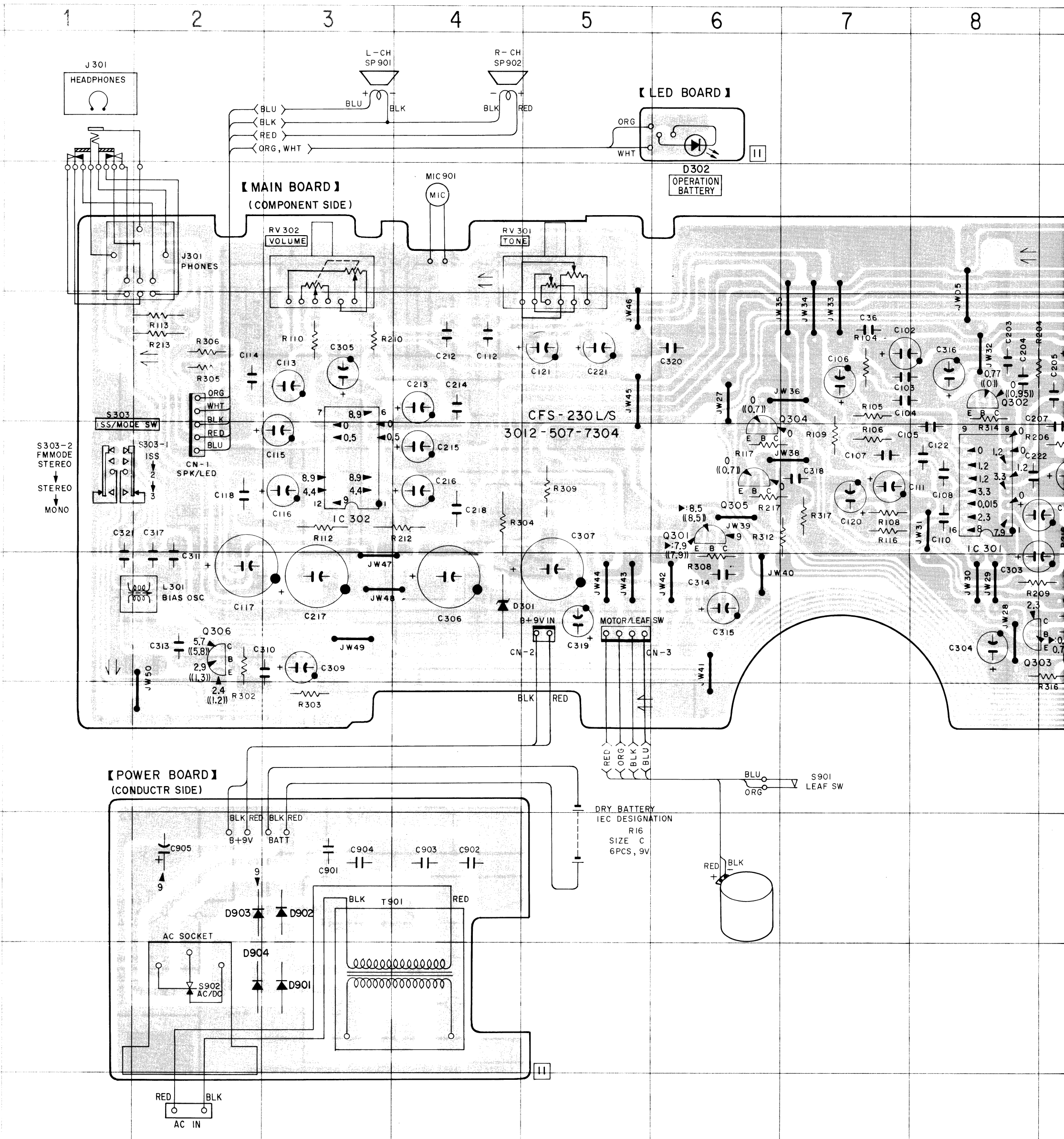
Note:

- Color code of sleeving over the end of the jacket.



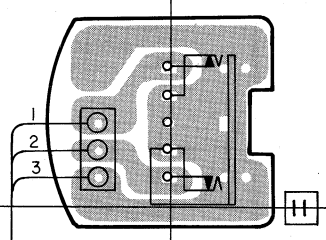
- ○— : parts extracted from the component side.

OUNTING DIAGRAMS



9 10 11 12 13 14 15

【 WALKMAN BOARD 】



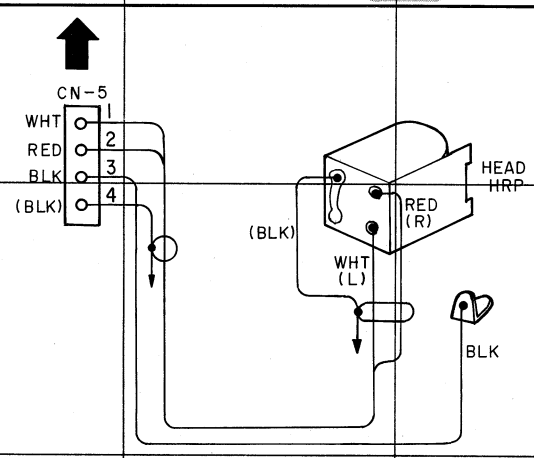
S302
FUNCTION
TAPE → WALKMAN IN → RADIO
(RADIO OFF)

S304
BAND SELECT
FM → MW → LW

ANT
TELESCOPIC
ANTENNA

BLK

S302-2 S302-1 S302-3 JW5
S302-5 S302-6 S302 4
S304-3 S304-2 S304-5
S304-4 S304 6 S304 1
C406 C404 C403
L7 (SWANT)
L4 MW
L7 LW
JW01 JW02 JW03 JW04
CT3 CT5 SW
L5 L6 JW6 JW7
CV3 CV4 CT6 CT4 CV2 CV1 CT2 CT1
TP1 BLK
D1 R1
L2 (FM OSC)
BPF1
C202 C203 C204 R204 C205 C206
JW16 JW17 R115 R114 CN 4 WM/IN
R214 R203 R103 JW15
R17 R16 R18 R19 R20
T2(AM)
C25 C17 C33 C32 C31 C24 C29 R9 JW14
IC 2 IC 3
C19 C35 D3 C9 C15
R4 R5 R6 R8 R7 CF2
C7 C2 C1 L1 C4 C6 R2 R3
C12 C22 C21 C13 C14 CF1 T3 (FM) T1 (FM) D2
C11 C10 C3 C5 JW10 JW11 JW12 JW13
R21 RV1 C23 C34 C30 C28 R10 R12 R11 R13
C201 C101 JW24 JW23 JW22 JW21 CN-5 R/P HEAD
R310 R307 R311 R316 R301 C301 Q303
JW25 JW26 JW27 JW28
C203 C204 R204 C205 C206 Q302
C207 C208 R205 R206 C222 R107 C109 C211 C220 R216 C210 R207 C209 C303 R208 R209
S301 R/P SW PLAY RECORD
JW18 JW19 JW20 R102 R202 R215
R15 R14 C25
CV3 CV4 CT6 CT4 CV2 CV1 CT2 CT1
TP1 BLK
D1 R1
L2 (FM OSC)
BPF1
C2 C1 L1 C4 C6 R2 R3 C7
C12 C22 C21 C13 C14 CF1 T3 (FM) T1 (FM) D2
C11 C10 C3 C5 JW10 JW11 JW12 JW13
R21 RV1 C23 C34 C30 C28 R10 R12 R11 R13
C201 C101 JW24 JW23 JW22 JW21 CN-5 R/P HEAD
R310 R307 R311 R316 R301 C301 Q303
JW25 JW26 JW27 JW28
C203 C204 R204 C205 C206 Q302
C207 C208 R205 R206 C222 R107 C109 C211 C220 R216 C210 R207 C209 C303 R208 R209
S301 R/P SW PLAY RECORD
JW18 JW19 JW20 R102 R202 R215
R15 R14 C25
R17 R16 R18 R19 R20
T2(AM)
C25 C17 C33 C32 C31 C24 C29 R9 JW14
IC 2 IC 3
C19 C35 D3 C9 C15
R4 R5 R6 R8 R7 CF2
C7 C2 C1 L1 C4 C6 R2 R3
C12 C22 C21 C13 C14 CF1 T3 (FM) T1 (FM) D2
C11 C10 C3 C5 JW10 JW11 JW12 JW13
R21 RV1 C23 C34 C30 C28 R10 R12 R11 R13
C201 C101 JW24 JW23 JW22 JW21 CN-5 R/P HEAD
R310 R307 R311 R316 R301 C301 Q303
JW25 JW26 JW27 JW28
C203 C204 R204 C205 C206 Q302
C207 C208 R205 R206 C222 R107 C109 C211 C220 R216 C210 R207 C209 C303 R208 R209
S301 R/P SW PLAY RECORD
JW18 JW19 JW20 R102 R202 R215
R15 R14 C25
R17 R16 R18 R19 R20
T2(AM)
C25 C17 C33 C32 C31 C24 C29 R9 JW14
IC 2 IC 3
C19 C35 D3 C9 C15
R4 R5 R6 R8 R7 CF2
C7 C2 C1 L1 C4 C6 R2 R3
C12 C22 C21 C13 C14 CF1 T3 (FM) T1 (FM) D2
C11 C10 C3 C5 JW10 JW11 JW12 JW13
R21 RV1 C23 C34 C30 C28 R10 R12 R11 R13
C201 C101 JW24 JW23 JW22 JW21 CN-5 R/P HEAD
R310 R307 R311 R316 R301 C301 Q303
JW25 JW26 JW27 JW28
C203 C204 R204 C205 C206 Q302
C207 C208 R205 R206 C222 R107 C109 C211 C220 R216 C210 R207 C209 C303 R208 R209
S301 R/P SW PLAY RECORD
JW18 JW19 JW20 R102 R202 R215
R15 R14 C25
R17 R16 R18 R19 R20
T2(AM)
C25 C17 C33 C32 C31 C24 C29 R9 JW14
IC 2 IC 3
C19 C35 D3 C9 C15
R4 R5 R6 R8 R7 CF2
C7 C2 C1 L1 C4 C6 R2 R3
C12 C22 C21 C13 C14 CF1 T3 (FM) T1 (FM) D2
C11 C10 C3 C5 JW10 JW11 JW12 JW13
R21 RV1 C23 C34 C30 C28 R10 R12 R11 R13
C201 C101 JW24 JW23 JW22 JW21 CN-5 R/P HEAD
R310 R307 R311 R316 R301 C301 Q303
JW25 JW26 JW27 JW28



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